

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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Applicant's or agent's file reference <b>TJ0402 - PCT</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/JP2004/008516</b>	International filing date (day/month/year) <b>10/06/2004</b>	(Earliest) Priority Date (day/month/year) <b>11/07/2003</b>
Applicant <b>TOYOTA JIDOSHA KABUSHIKI KAISHA</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b.  With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2.  Certain claims were found unsearchable (See Box II).

3.  Unity of invention is lacking (see Box III).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 2, 3

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b.  none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/008516A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H01L29/739

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category <sup>o</sup>	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 452 228 B1 (HARA KUNIHIKO ET AL) 17 September 2002 (2002-09-17) column 16, line 40 – column 17, line 54; figures 19,20 -----	1,2
X	US 5 866 931 A (ROSSEN REBECCA ET AL) 2 February 1999 (1999-02-02) column 6, line 16 – line 40; figure 6 -----	1,2
X	US 5 753 942 A (SEOK KYUNG-WOOK) 19 May 1998 (1998-05-19) column 5, line 4 – line 27; figures 5a,5b -----	1,2
X	EP 1 093 168 A (SHINDENGEN ELECTRIC MFG COMPAN) 18 April 2001 (2001-04-18) paragraphs '0116! – '0120!, '0134!, '0135!; figures 25a,25b,31,32a,32b -----	3,4
	-/-	

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

2 December 2004

Date of mailing of the international search report

13.12.2004

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/008516

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 271 562 B1 (GRAF HEIMO ET AL) 7 August 2001 (2001-08-07) column 6, line 41 - column 9, line 2; figure 1 ----- US 6 008 092 A (GOULD HERBERT J) 28 December 1999 (1999-12-28) column 3, line 28 - column 6, line 34; figures 1,2 ----- US 5 451 531 A (TOMOMATSU YOSHIFUMI ET AL) 19 September 1995 (1995-09-19) column 10, line 59 - column 11, line 25; figure 5 -----	5,6
X		5,6
X		5,6

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/JP2004/008516

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
US 6452228	B1	17-09-2002	JP 11330464 A DE 19900171 A1 JP 11251592 A SE 519692 C2 SE 9900008 A US 6165822 A JP 2000200907 A	30-11-1999 08-07-1999 07-09-1999 01-04-2003 06-07-1999 26-12-2000 18-07-2000
US 5866931	A	02-02-1999	US 5410170 A	25-04-1995
US 5753942	A	19-05-1998	KR 206555 B1 DE 19654692 A1 JP 9199727 A	01-07-1999 03-07-1997 31-07-1997
EP 1093168	A	18-04-2001	JP 2001185725 A EP 1093168 A2 US 6459128 B1	06-07-2001 18-04-2001 01-10-2002
US 6271562	B1	07-08-2001	DE 19808348 C1 EP 0939446 A1 JP 3124524 B2 JP 11289091 A TW 434906 B	24-06-1999 01-09-1999 15-01-2001 19-10-1999 16-05-2001
US 6008092	A	28-12-1999	DE 19704996 A1 FR 2745952 A1 GB 2310082 A ,B IT MI970242 A1 JP 10027807 A SG 54461 A1 TW 445547 B	30-10-1997 12-09-1997 13-08-1997 07-08-1998 27-01-1998 16-11-1998 11-07-2001
US 5451531	A	19-09-1995	DE 69314368 D1 DE 69314368 T2 EP 0561267 A2 JP 2949001 B2 JP 6013620 A US 5321281 A	13-11-1997 19-03-1998 22-09-1993 13-09-1999 21-01-1994 14-06-1994

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